

PATENT COOPERATION TREATY

PCT

NOTIFICATION OF ELECTION

(PCT Rule 61.2)

From the INTERNATIONAL BUREAU

To:

Commissioner
 US Department of Commerce
 United States Patent and Trademark
 Office, PCT
 2011 South Clark Place Room
 CP2/5C24
 Arlington, VA 22202
 ETATS-UNIS D'AMERIQUE
 in its capacity as elected Office

Date of mailing (day/month/year) 06 March 2001 (06.03.01)	
International application No. PCT/EP00/05621	Applicant's or agent's file reference SCB569PCT
International filing date (day/month/year) 19 June 2000 (19.06.00)	Priority date (day/month/year) 22 June 1999 (22.06.99)
Applicant BARTORELLI, Alberto et al	

1. The designated Office is hereby notified of its election made:

☒ in the demand filed with the International Preliminary Examining Authority on:
 16 January 2001 (16.01.01)

☐ in a notice effecting later election filed with the International Bureau on:

2. The election ☒ was
☐ was not

made before the expiration of 19 months from the priority date or, where Rule 32 applies, within the time limit under Rule 32.2(b).

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland Facsimile No.: (41-22) 740.14.35	Authorized officer C. Cupello Telephone No.: (41-22) 338.83.38
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PATENT COOPERATION TREATY

10/018748

PCT

NOTIFICATION OF THE RECORDING
OF A CHANGE

(PCT Rule 92bis.1 and

Administrative Instructions, Section 422)

From the INTERNATIONAL BUREAU

To:

MINOJA, Fabrizio
Bianchetti Bracco Minoja
Via Rossini, 8
I-20122 Milano
ITALIE

TECH CENTER 16002900

RECEIVED
JUL 17 2002

Date of filing (day/month/year) 09 January 2002 (09.01.02)	
Applicant's or agent's file reference SC8569PCT	IMPORTANT NOTIFICATION
International application No. PCT/EP00/05621	International filing date (day/month/year) 19 June 2000 (19.06.00)

1. The following indications appeared on record concerning:									
<input checked="" type="checkbox"/> the applicant	<input checked="" type="checkbox"/> the inventor <input type="checkbox"/> the agent <input type="checkbox"/> the common representative								
Name and Address BARTORELLI, Alberto PANERAI, Alberto NICOLETTI, Pierferdinando Galleria del Corso, 2 I-20122 Milano ITALY	<table border="1"> <tr> <td>State of Nationality IT</td> <td>State of Residence, IT</td> </tr> <tr> <td colspan="2">Telephone No.</td> </tr> <tr> <td colspan="2">Facsimile No.</td> </tr> <tr> <td colspan="2">Teleprinter No.</td> </tr> </table>	State of Nationality IT	State of Residence, IT	Telephone No.		Facsimile No.		Teleprinter No.	
State of Nationality IT	State of Residence, IT								
Telephone No.									
Facsimile No.									
Teleprinter No.									
2. The International Bureau hereby notifies the applicant that the following change has been recorded concerning:									
<input type="checkbox"/> the person <input type="checkbox"/> the name <input checked="" type="checkbox"/> the address <input type="checkbox"/> the nationality <input type="checkbox"/> the residence									
Name and Address BARTORELLI, Alberto PANERAI, Alberto NICOLETTI, Pierferdinando Via Filodrammatici 10 I-20122 Milano ITALY	<table border="1"> <tr> <td>State of Nationality IT</td> <td>State of Residence IT</td> </tr> <tr> <td colspan="2">Telephone No.</td> </tr> <tr> <td colspan="2">Facsimile No.</td> </tr> <tr> <td colspan="2">Teleprinter No.</td> </tr> </table>	State of Nationality IT	State of Residence IT	Telephone No.		Facsimile No.		Teleprinter No.	
State of Nationality IT	State of Residence IT								
Telephone No.									
Facsimile No.									
Teleprinter No.									
3. Further observations, if necessary:									
4. A copy of this notification has been sent to:									
<input checked="" type="checkbox"/> the receiving Office	<input type="checkbox"/> the designated Offices concerned								
<input type="checkbox"/> the International Searching Authority	<input checked="" type="checkbox"/> the elected Offices concerned								
<input type="checkbox"/> the International Preliminary Examining Authority	<input type="checkbox"/> other:								

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer N. Wagner
Facsimile No.: (41-22) 740.14.35	Telephone No.: (41-22) 338.83.38

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference SCB569PCT	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/EP 00/05621	International filing date (day/month/year) 19/06/2000	(Earliest) Priority Date (day/month/year) 22/06/1999
Applicant ZETESIS S.P.A.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 3 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☐ Certain claims were found unsearchable (See Box I).

3. ☐ Unity of invention is lacking (see Box II).

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the drawings to be published with the abstract is Figure No.

☐ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

☒ None of the figures.

A. CLASSIFICATION OF SUBJECT MATTER IPC 7 A61K38/17 A61P37/06		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) IPC 7 A61K		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used)		
BIOSIS, MEDLINE, EPO-Internal, WPI Data, PAJ		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	BUSSOLATI G ET AL: "CYTOLYTIC AND TUMOR INHIBITORY ANTIBODIES AGAINST UK114 PROTEIN IN THE SERA OF CANCER PATIENTS" INTERNATIONAL JOURNAL OF ONCOLOGY, GR, EDITORIAL ACADEMY OF THE INTERNATIONAL JOURNAL OF ONCOLOGY,, vol. 10, no. 4, 1 April 1997 (1997-04-01), pages 779-785, XP002040514 ISSN: 1019-6439 page 780, left-hand column, line 29 - line 43 page 784, left-hand column, line 14 - line 19 page 784, right-hand column, line 39 - line 55 page 784, right-hand column --- ---	3
<input checked="" type="checkbox"/>	Further documents are listed in the continuation of box C.	<input checked="" type="checkbox"/> Patent family members are listed in annex.
* Special categories of cited documents : "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "Z" document member of the same patent family		
Date of the actual completion of the international search		Date of mailing of the international search report
13 December 2000		29/12/2000
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel: (+31-70) 340-2040, Tx: 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer Le Flao, K

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CECILIANI F ET AL: "THE PRIMARY STRUCTURE OF UK114 TUMOR ANTIGEN" FEBS LETTERS,NL,ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, vol. 393, 16 September 1996 (1996-09-16), pages 147-150, XP002040513 ISSN: 0014-5793 abstract ---	1-3
P,X	WO 99 43340 A (ZETESIS S.P.A.) 2 September 1999 (1999-09-02) claims 1-4 ---	3
T	PANERAI ALBERTO E ET AL: "Chronic administration of UK-114, a multifunctional emerging protein, modulates the Th1/Th2 cytokine pattern and experimental autoimmune diseases." ANNALS OF THE NEW YORK ACADEMY OF SCIENCES, vol. 876, 22 June 1999 (1999-06-22), pages 229-235, XP000971426 First International Conference on the Neuroendocrine Immune Basis of the Rheumatic Diseases;Genova, Italy; September 18-20, 1998, basis of the rheumatic diseases. June 22, 1999 New York Academy of Sciences 2 East 63rd Street, New York, New York 10021, USA ISBN: 1-57331-215-0 the whole document -----	1-3

Information on patent family members

PCT/EP 00/05621

Form PCT/ISA/210 (patent family annex) (July 1992)

PATENT COOPERATION TREATY

PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference SCB569PCT	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/PEA/416)	
International application No. PCT/EP00/05621	International filing date (day/month/year) 19/06/2000	Priority date (day/month/year) 22/06/1999
International Patent Classification (IPC) or national classification and IPC A61K38/00		
Applicant ZETESIS S.P.A. et al.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.



2. This REPORT consists of a total of 4 sheets, including this cover sheet.

- ☐ This report is also accompanied by ANNEXES, i.e. sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☒ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 16/01/2001	Date of completion of this report 10.09.2001
Name and mailing address of the international preliminary examining authority:  European Patent Office D-80293 Munich Tel. +49 89 2399 - 0 Tx: 523656 eprmu d Fax: +49 89 2399 - 4465	Authorized officer Didelon, F Telephone No. +49 89 2399 7332 

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No. PCT/EP00/05621

1. Basis of the report

1. With regard to the **elements** of the international application (*Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17):*)

Description, pages:

1-6 as originally filed

Claims, No.:

1-3 as originally filed

2. With regard to the **language**, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language: , which is:

- ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. The amendments have resulted in the cancellation of:

- ☐ the description, pages:
- ☐ the claims, Nos.:
- ☐ the drawings, sheets:

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT**

International application No. PCT/EP00/05621

(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

6. Additional observations, if necessary:

V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims 1-2
	No: Claims 3
Inventive step (IS)	Yes: Claims 1-2
	No: Claims 3
Industrial applicability (IA)	Yes: Claims 1-3
	No: Claims

**2. Citations and explanations
see separate sheet**

VI. Certain documents cited

1. Certain published documents (Rule 70.10)

and / or

2. Non-written disclosures (Rule 70.9)

see separate sheet

**INTERNATIONAL PRELIMINARY
EXAMINATION REPORT - SEPARATE SHEET**

International application No. PCT/EP00/05621

Comments on item V:

1. Reference is made to the following document D1:

D1: BUSSOLATI G ET AL: 'CYTOLYTIC AND TUMOR INHIBITORY ANTIBODIES AGAINST UK114 PROTEIN IN THE SERA OF CANCER PATIENTS' INTERNATIONAL JOURNAL OF ONCOLOGY, GR, EDITORIAL ACADEMY OF THE INTERNATIONAL JOURNAL OF ONCOLOGY,, vol. 10, no. 4, 1 April 1997 (1997-04-01), pages 779-785, XP002040514 ISSN: 1019-6439

2. The present application does not meet the requirements of Article 33(1) and (2) PCT because the subject-matter of claim 3 is not considered as novel.

Document D1 reveals that the protein of the application UK114 is used as immunizing agent to produce antibodies against tumors.

The use of UK114 in medicine is therefore not considered as novel.

3. Claims 1 and 2 directed to the use of UK114 for reducing or inhibiting graft rejection is not disclosed nor suggested in the prior art available.
Said claims thus meet the requirements of Article 33(1) to (3) PCT.

Comments on item VI:

Certain published documents (Rule 70.10)

Application No Patent No	Publication date (day/month/year)	Filing date (day/month/year)	Priority date (valid claim) (day/month/year)
WO 99 43340 A	02.09.1999	18.02.1999	24.02.1998

This document reveals oral pharmaceutical compositions containing UK114, as medicaments for cancer therapy.

Claim 3 would therefore lack novelty in the regional phase in case the priority of the present application would not be valid.

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
28 December 2000 (28.12.2000)

PCT

(10) International Publication Number
WO 00/78329 A3

- (51) International Patent Classification⁷: **A61K 38/17, A61P 37/06**
- (21) International Application Number: **PCT/EP00/05621**
- (22) International Filing Date: **19 June 2000 (19.06.2000)**
- (25) Filing Language: **English**
- (26) Publication Language: **English**
- (30) Priority Data:
MI99A001384 22 June 1999 (22.06.1999) IT
- (71) Applicant (for all designated States except US): **ZETESIS S.P.A. [IT/IT]; Galleria del Corso, 2, I-20122 Milano (IT).**
- (72) Inventors; and
(75) Inventors/Applicants (for US only): **BARTORELLI, Alberto [IT/IT]; Galleria del Corso, 2, I-20122 Milano (IT). PANERAI, Alberto [IT/IT]; Galleria del Corso, 2, I-20122 Milano (IT). NICOLETTI, Pierferdinando [IT/IT]; Galleria del Corso, 2, I-20122 Milano (IT).**
- (74) Agents: **MINOJA, Fabrizio et al.; Bianchetti Bracco Minoja S.r.l., Via Rossini, 8, I-20122 Milano (IT).**
- (81) Designated States (national): **AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW.**
- (84) Designated States (regional): **ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).**
- Published:
— With international search report.
- (88) Date of publication of the international search report:
19 April 2001

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **THE USE OF THE PROTEIN UK 114 FOR INHIBITING ORGAN TRANSPLANT REJECTION**

(57) A abstract: **The use of the protein UK 114 for reducing or preventing the rejection of organ transplants, as well as for maintaining transplant acceptance.**

WO 00/78329 A3

INTERNATIONAL SEARCH REPORT

Intern. Application No.

PCT/EP 00/05621

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61K38/17 A61P37/06

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 A61K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

Biosis, MEDLINE, EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>BUSSOLATI G ET AL: "CYTOLYTIC AND TUMOR INHIBITORY ANTIBODIES AGAINST UK114 PROTEIN IN THE SERA OF CANCER PATIENTS" INTERNATIONAL JOURNAL OF ONCOLOGY, 6R, EDITORIAL ACADEMY OF THE INTERNATIONAL JOURNAL OF ONCOLOGY, vol. 10, no. 4, 1 April 1997 (1997-04-01), pages 779-785, XP002040514 ISSN: 1019-6439 page 780, left-hand column, line 29 - line 43 page 784, left-hand column, line 14 - line 19 page 784, right-hand column, line 39 - line 55 page 784, right-hand column</p> <p style="text-align: center;">-/--</p>	3

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier document but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

- "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- "Z" document member of the same patent family

Date of the actual completion of the international search

13 December 2000

Date of mailing of the international search report

29/12/2000

Name and mailing address of the ISA

European Patent Office, P.B. 5618 Patentkanal 2
NL - 2200 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nt,
Fax (+31-70) 340-3016

Authorized officer

Le Flao, K

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	CECILIANI F ET AL: "THE PRIMARY STRUCTURE OF UK114 TUMOR ANTIGEN" FEBS LETTERS,NL,ELSEVIER SCIENCE PUBLISHERS, AMSTERDAM, vol. 393, 16 September 1996 (1996-09-16), pages 147-150, XP002040513 ISSN: 0014-5793 abstract	1-3
P,X	WO 99 43340 A (ZETESIS S.P.A.) 2 September 1999 (1999-09-02) claims 1-4	3
T	PANERAI ALBERTO E ET AL: "Chronic administration of UK-114, a multifunctional emerging protein, modulates the Th1/Th2 cytokine pattern and experimental autoimmune diseases." ANNALS OF THE NEW YORK ACADEMY OF SCIENCES, vol. 876, 22 June 1999 (1999-06-22), pages 229-235, XP000971426 First International Conference on the Neuroendocrine Immune Basis of the Rheumatic Diseases;Genova, Italy; September 18-20, 1998, basis of the rheumatic diseases. June 22, 1999 New York Academy of Sciences 2 East 63rd Street, New York, New York 10021, USA ISBN: 1-57331-215-0 the whole document	1-3

INTERNATIONAL SEARCH REPORT
Information on patent family members

International Application No.
PCT/EP 00/05621

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
WO 9943340 A	02-09-1999	IT MI980356 A AU 2624499 A	24-08-1999 15-09-1999